

CASE REPORT

Squamous Cell Cancer of The Lung with Synchronous Renal Cell Carcinoma

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Abstract

Coexistence of two or more primary cancers is a relatively rare case. Not with standing that the coexistence of multiple primary cancers is often discussed in the literature, there is a small number of publications concerning the coexistence of squamous cell lung carcinoma and renal cancer. In this case report, detection of both squamous cell lung carcinoma and primary renal cancer in one male patient is going to be discussed.

KEYWORDS: Lung cancer, multiple primary cancers, synchronous tumor, renal cancer

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INTRODUCTION

Cancers grown at more than one focuses are multiple primary cancers (MPC). MPC was documented for the first time in 1889 by Billroth et al. Warren used MPC definition, afterwards [1,2]. MPC can be classified as synchronous and metachronous. If primary tumors were diagnosed at the same time or within six months, they are called as synchronous cancer; if second primary tumor is diagnosed after six months of diagnosis of the primary tumor, it is called as metachronous cancer [3]. Many MPC's were reported in the literature. Although primary squamous lung cell carcinomas or renal cancer cases are very frequent, synchronous presentation of the squamous cell histologic subtypes of these cancers is very rare. In this case report, primary squamous lung cell carcinoma and synchronous renal cancer will be reported.

CASE PRESENTATION

A 55-year-old male patient with respiratory disorder and haemoptysis symptoms admitted to the clinic. In the chest radiograph an approximately 6 x 7 cm mass adjacent to the left hilum was detected and patient was directed to us (Figure 1). In the patient's history, there wasn't any known chronic illness and drug use but the patient was smoking 40 packs in a year. In family history, there was no malignancy. On physical examination; patient's fever was taken as 36.3°C, pulsation 105/min, blood pressure 100/60 mmHg and respiratory rate as 16/min. During lung auscultation; bilateral diffuse rhonchus and a decrease in the lung sounds at lingula were detected. In the laboratory tests: white blood cell $13.38 \times 10^3/\mu\text{L}$, hemoglobin: 12.5 mg/dL, platelet: $519 \times 10^3/\mu\text{L}$, total calcium: 12.7 mg/dL, erythrocyte sedimentation rate: 17 mm/h and C-reactive protein: 13 mg/L were found. In thoracic computed tomography (CT), central soft tissue densities that show nodularity in patches at the left hilar level and cavitory lesions with irregular inner contour, with 6.5 x 8 cm of axial extent, forming pleural retraction that abutting fissure at the upper lobe segments were identified (Figure 2a). Also an approximately 9 cm lesion was detected in the lower 1/2 part of the right kidney within the upper abdominal organ section (Figure 2b). Through the positron emission tomography (PET-CT) an approximately 80 x 70 x 78 sized mm mass (SUV max: 17) that its boundaries cannot be well-defined from the left pulmonary artery which encircles the main left bronchus and its branches extend from the hilus of the left lung to the lateral costal pleura. In the lower 1/2 segment of the right kidney, a 9 cm sized mass (SUV max: 19) was detected. According to these symptoms bronchoscopic biopsy was conducted on the lower end of the left main bronchus in another hospital via fiberoptic bronchoscopy. A sample was taken via tru-cut biopsy conducted on the lesion in the right kidney. With reference to the lung and kidney biopsy results, non-small cell lung carcinoma (favoured with squamous cell carcinoma) and renal cell carcinoma were determined, respectively (Figure 3a,b).



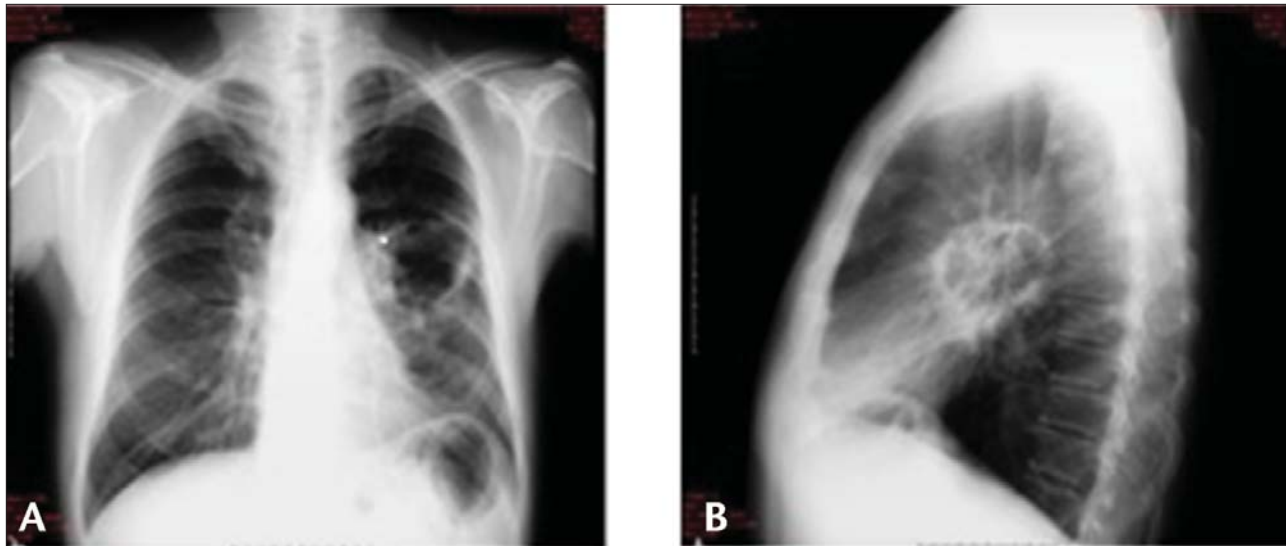


Figure 1. Posterior-anterior and lateral chest radiograph.

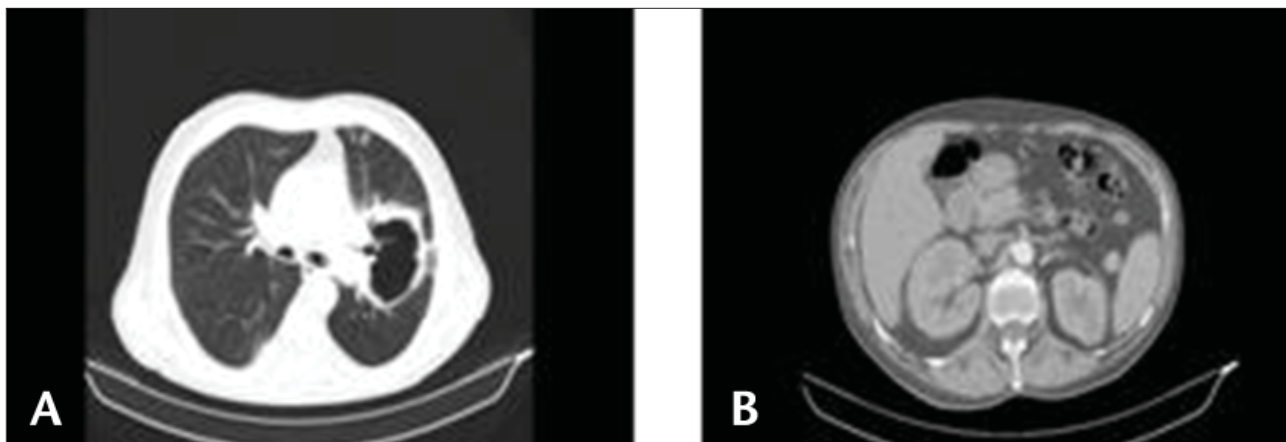


Figure 2. Computed tomography image, (A) renal mass, (B) lung mass.

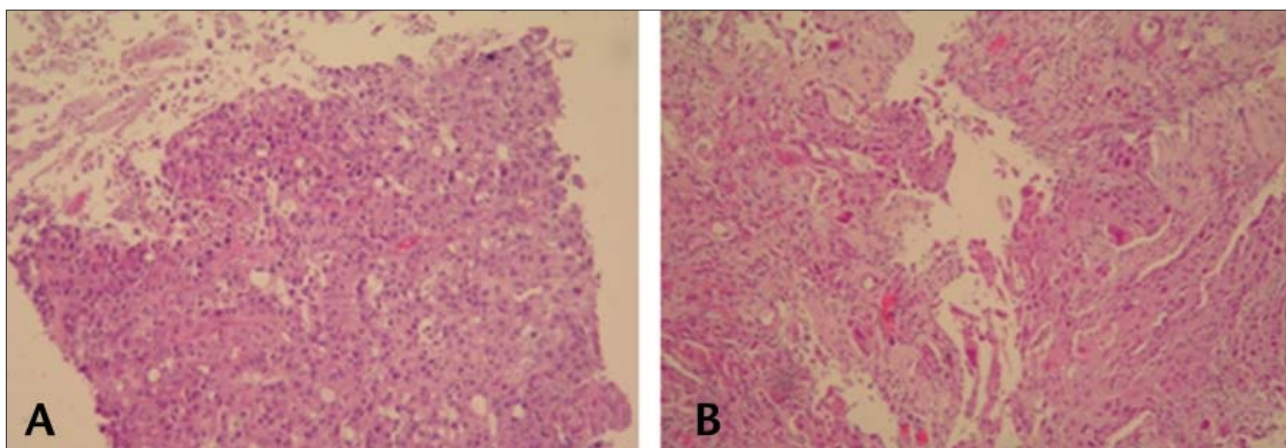


Figure 3. Pathology images, (A) renal cell carcinoma pathology images, (B) squamous cell carcinoma.

As regard to synchronous squamous lung cell carcinoma and renal cell carcinoma, gemcitabine-cisplatin-interferon treatment was started. Upon the suggestion of radiation oncology department, radiotherapy was planned due to massive hemoptysis.

DISCUSSION

Although MPC's are rarely seen, its incidence has steadily increased with the advancing imaging techniques. Incidence rate was indicated as 0.73-11.7% in the recent publications[4]. MPC cases are mostly seen in lung, genitourinary, hepatobiliary

and gastrointestinal tracts [4-6]. The most common primary tumor regions that synchronize with lung cancer are lung (31%), head and neck (20%) and uroepithelial (11%) tissues [7]. In the literature, coexistence of lung cancer with primary renal tumors is less common than other uroepithelial tumors. There may be an agent involved in the aetiology that causes both these primary cancers. In our case, this agent was smoking which is carcinogen for both lung and kidney. We come across four cases and a population-based study about this coexistence in the literature. In the community-based study, patients who were diagnosed with primary renal cancer were studied for 12 years to observe secondary primary cancer development. Synchronous tumors were observed in 53 out of 1425 patients. Primary lung cancer was observed in 8 of them (15.09%) [8].

Synchronous lung and renal cancer were detected in patients whose chest X-Rays were taken due to another reason in the case study presented by Libby et al. In the case study presented by Otsuki et al., patient with lesions on the kidney and adrenal gland were investigated; renal clear cell carcinoma and metastatic adenocarcinoma in the adrenal gland were detected [9]. Along with further investigation, a mass lesion was detected in the lung and they were identified as primary lung adenocarcinoma [10]. Similarly, in Ferrero and Ferrigno D. 's cases, synchronous lung and renal cancers have been diagnosed [11,12].

We presented this case due to synchronous primary renal cancer to primary lung cancer is a rare condition as it's understood from the researches available in the literature. Our case was presented with dyspnoea and haemoptysis. Further investigations were made based on the lesion diagnosed in neighbourhood of the left lung hilum via chest X-Ray. In the imaging of the lung, lesion in the right kidney was observed in cross sections. At first sight, lung cancer metastasis was considered. Via bronchoscopic and tru-cut biopsies, primary squamous lung cell cancer and primary renal cell cancer were diagnosed. Gemcitabine-cisplatin-interferon combination therapy was given to the patient and radiotherapy was planned for massive hemoptysis.

Not with standing that the coexistence of primary renal cancer and primary lung cancer have a narrow coverage in MPC's, metastasis to each other is significant. Due to the fact that metastasis and primary cancer treatments differ from each other, the possibility of primary cancer should be considered when a lesion is detected on any of them.

Conflict of Interest: The authors declare that they have no conflict of interest. All subjects were provided informed written consent prior to participation in the report.

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